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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,808	08/15/2003	Chunsheng Huang	NAN065 US	3123

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SILICON VALLEY PATENT GROUP LLP
2350 MISSION COLLEGE BOULEVARD
SUITE 360
SANTA CLARA, CA 95054

EXAMINER

NGUYEN, TU T

ART UNIT PAPER NUMBER

2877

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/642,808

Applicant(s)

HUANG, CHUNSHENG

Examiner

Tu T. Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7 and 13-18 is/are rejected.
- 7) ☒ Claim(s) 8-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08/15/2003</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claim 15 is objected to because of the following informalities:

- 1) Claim 15, line 3, "an initial measurement" should be changed to "the initial measurement".
- 2) Claim 15, line 3, "a first reference location" should be changed to "the first reference location".
- 3) Claim 15, line 3, "a second" should be changed to "the second".
- 4) Claim 15, line 8, "a subsequent measurement" should be changed to "the subsequent measurement".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13, line 9, the phrase "after the sample" is not ambiguous. The location of the phase retarder is not clear. What does applicant mean "after the sample"?

Claims 14-18 are also rejected as being depended on a rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al (5,771,094).

With respect to claim 7, Carter discloses method for correcting calibration function of an ellipsometer. The method comprises: producing an initial measurement of at least one reference location STEP1, STEP2 (fig 2) using an ellipsometer (fig 1); producing a subsequent measurement of the at least one reference location STEP3 (fig 2) with the ellipsometer (fig 1); using the initial measurement of the least one reference location with the subsequent measurement of the least one reference location to correct the calibration of the ellipsometer STEP4-STEP8 (fig 2) (column 2, lines 13-30 and column 4, lines 40-66).

Carter does not explicitly disclose determining the calibration error as claimed. However, by disclosing correcting the calibration of the ellipsometer, it would have been obvious that Carter would have to have the claimed step of determining the calibration error before correcting the calibration.

Claims 13-14,16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al (5,771,094) in view of Lee et al (6,184,984).

With respect to claim 13, refer to discussion in claim 7 above for the computer system. Carter does not explicitly disclose the claimed ellipsometer. Lee discloses an ellipsometer. The ellipsometer comprises: a polarization state generator, including an electromagnetic source 10 and 88 (fig 1), the polarization state generator produces an electromagnetic beam of known polarization state that is incident on the at least one reference location during calibration (abstract or teaching using the claimed polarization state generator in column 1, lines 25-30); a phase retarder in the path of the electromagnetic beam after the sample (column 16, lines 4-10); at least one detector that receives the electromagnetic beam after is incident on the at least one reference location 72 and 74 (fig 1). It would have been obvious to use Carter's computer to determining the calibration error of Lee's ellipsometer to facilitate the measuring.

With respect to claim 14, It would have been obvious to modify Carter to measure at different locations as claimed to facilitate the measurement. Further Carter discloses using a movement X-Y sample stage (column 6, lines 7-15). It would have been obvious that Carter's system could measure any desired reference locations.

With respect to claims 16-17, it would have been obvious a design choice to modify Carter's first and second reference locations as claimed for different system set up. The modification involves only routine skill in the art.

With respect to claim 18, it would have been obvious to modify Carter to put the sample in a vacuum or inert gas or an ambient environment to facilitate the measuring.

Allowable Subject Matter

Claims 1-6 are allowed.

Claims 8-12, 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior arts of record do not disclose a method. The method comprises: producing initial measurements of a first reference location and a second reference location, wherein the first reference location and the second reference location are designed to produce different measurement results; producing subsequent measurements of the first reference location and the second reference location; and using the initial measurements of the first reference location and the second reference location and the subsequent measurements of the first reference location and the second reference location to determine the calibration error of the ellipsometer whichs structurally arranged and functionally operated as claimed in claims 1,8,15.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

08/10/2005